



B. A Green Gateway to the River

Planning Principles: Poplar Point should be a gracious and inviting green gateway to Anacostia Park and the Anacostia River. Poplar Point should be cleaned up to promote access to parkland and to allow for the restoration of Stickfoot Creek and accompanying wetlands.

For years, the natural environment along the Anacostia River and on Poplar Point has been neglected and abused by human habitat. Examples of this abound - the natural wetlands that existed over 100 years ago were filled in for the park, there is environmental contamination in the soils at the former tree nurseries at Poplar Point, and the River is polluted from agricultural and industrial runoff up-river and from sewage and stormwater overflows.

One of the guiding principles for the Anacostia Waterfront Initiative is to create a clean and healthy environment for all visitors and residents as well as for birds, animals and plants. The term for this approach to site planning is commonly called “sustainable development” and, in its most simple definition, is a philosophy of planning that has a lasting and nondestructive way of creating a built environment. It is about creating places that protect natural resources and reduce or eliminate human impact on the environment. The result of incorporating these sustainability principles will be that Poplar Point will become a “green gateway” to the Anacostia River and the whole of Anacostia Park.

This section discusses general principles for sustainable development at Poplar Point and provides details in several areas where significant work has occurred. Several of the principles – multi-modal transportation and transit-oriented development – are discussed in other sections of this chapter.

1 Sustainability Principles

To support the creation of healthy ecosystems with a diversity of plant and animal life, Poplar Point was planned around a series of principles for sustainable development. These principles were targeted to the existing conditions at Poplar

Point and future development we expect to occur on site. The principles include the following:

Repair past environmental damage – Human activities have left a legacy of pollution on part of the site. The pollution should be cleaned up to protect human health and the environment for future users.

Daylight creeks – During the development of the city, creeks were put in underground culverts. Restoration of the site should include “daylighting” culverted creeks and making them a prominent site feature. This will provide a restored natural feature on the site and help to filter and reduce pollution from stormwater runoff.

Protect and restore wetlands – There are existing wetlands on the site that provide valuable natural areas. These wetlands should become features of the new Poplar Point Park. The wetlands will serve both functional and aesthetic purposes.

Provide natural areas for plants, animals and birds – Some of the highest quality habitat should be preserved for non-human species. The natural habitat should become a prominent feature of the site with limited human intervention.

Contribute to improved water quality – Future activity on the site should be conducted in a way that improves water quality in the Anacostia River. Activities include reduced paving, natural filtration techniques, and riparian buffers. Daylighting creeks and restoring wetlands are part of this effort.

Build “green” infrastructure – Infrastructure at Poplar Point should be maintained or built to protect the natural and man-made environments. These include flood control levees, wastewater pump stations, stormwater outfalls, and infrastructure related to the Metro station.

Support a diverse, multi-modal transportation system – Future activities at Poplar Point Park will be designed to reduce automobile transportation and encourage transit use, biking and walking. This will reduce air pollution from cars and reduce the impact of traffic on the surrounding community.



Figure 30: Example of park design - Mill Race Park, Columbus



Figures 31, 32: Examples of daylit creek; riparian vegetation

Support the development of green building – Standards will be put in place to ensure that new buildings on Poplar Point incorporate green (or high performance) design features (e.g., green roofs for habitat, energy efficiency, resource efficiency, indoor air quality, and light pollution). This includes best management building practices during construction of the building and ongoing operation and maintenance.

Increase transit-oriented development opportunities – New development will be built near the existing Anacostia Metro station to support alternative modes of transportation and help support community life.

Create identity by highlighting environmental initiatives – Daylighting of the Creek, wetlands restoration, and development of the park is an opportunity to create a new identity for the site as well as a desirable address for adjacent private development and public open spaces.

2 Daylight Creeks in Poplar Point

Daylighting projects liberate waterways that were buried in culverts or pipes, covered by decks, or otherwise removed from view. Bringing streams out of culverts and other underground channels enhances public space, improves water quality, and expands stream channel capacity.

Part of the process of restoring an urban watershed, such as the Anacostia, involves the rebuilding or re-creation of streams that have become damaged or severely altered by years of urbanization and agriculture. The plan for Poplar Point involves daylighting the Stickfoot storm sewer and making the creek a major feature of the site. A daylighted Stickfoot Creek will provide a number of benefits for Poplar Point and advance sustainable development goals including:

- Reducing runoff as a result of natural channel meandering
- Cleaning stormwater before it reaches the Anacostia River and the opportunity to implement stormwater best practices on existing Howard Road sites.

- Providing natural habitat for fish, birds and other wildlife
- Creating recreational amenities
- Providing educational opportunities

The new Stickfoot Creek will be a prominent feature of the site and will run approximately from the west side of the Metro garage to Anacostia River. It will be designed in conjunction with the wetlands to create a major water feature and natural habitat on Poplar Point.

3 Protect and Restore Wetlands

Presently the majority of wetlands on Poplar Point are on land formerly occupied by the tree nurseries. These wetlands provide valuable wildlife habitat for birds and other species, help to clean stormwater and can create a living classroom for visitors. As such, wetlands should be a part of the future Poplar Point Park.

The restored wetlands are planned as a centerpiece of the new Poplar Point Park. As is discussed below, pedestrian trails will traverse the wetlands on boardwalks or similar structures thus creating a space where people and nature can coexist. When the Poplar Point is complete, there will be approximately 13.6 acres of wetlands of which 10.5 acres are new or rebuilt. This will be in a combination of tidal and pothole wetlands extending from the heart of the park to the River. The largest proposed wetland would lie outside the site's levee, leaving it open to flooding during 100-year events.

Due to environmental contamination on the former Architect of the Capitol and the Lanham Tree Nursery lands, the existing wetlands may need to be replaced in the same general area as they are presently located. The exact amount, type, and location of the wetlands will be determined at a later date by the District of Columbia Department of Health.



4 Infrastructure

Despite the fact that there are few buildings or activities on Poplar Point, there are some significant infrastructure requirements that must be taken into account during the site planning process. These include the following:

Levee – a US Army Corps of Engineers levee exists on Poplar Point to protect Bolling Air Force base from flooding. This levee or one serving a similar purpose must be included in any site plan. To maximize infrastructure, this levee could also be used to protect future development that will occur in the Poplar Point Park or along the areas of private development.

Metro Facilities – The auxiliary facilities for the Anacostia Metro station, including the cut-and-cover tunnel for the trains and the emergency exit need to remain in place and are included in the site plan.

Pump Station/Wastewater Facilities – The District’s Water and Sewer Authority has recently completed a Combined Sewer System Long Term Control plan to address current issues with the Combined Sewer Outfall (or CSOs). Major elements in the Long Term Control Plan for the Anacostia River include construction of a storage/conveyance tunnel system to Poplar Point from the Northeast Boundary/Northeast DC, a dewatering pumping station at Poplar Point, rehabilitation of Main, ‘O’ Street, and Eastside pumping stations, and construction of a pipeline from Fort Stanton to Poplar Point to address the CSOs on the eastern side of the River.

To minimize the impact on Poplar Point Park, these facilities will be located underground in the median of the highway interchanges between Suitland Parkway and Anacostia Freeway. The area required for the pump station is approximately 1/3 of an acre and this can easily be accommodated and integrated with final plans for the area.

5 Green Building

In order to further support the commitment to a healthy environment on Poplar Point, future plans should encourage the development of “Green” and “High Performance” buildings. These building and sites should incorporate the following components:

Energy Conservation and Efficiency – Buildings and sites should be designed and equipped so as to reduce the amount of energy used to heat, cool, and light the interior space. Operating buildings more efficiently can reduce energy use, reduce building operating costs, and decrease production of greenhouse gasses that in turn reduces outdoor air pollution and global warming. Common techniques used to improve energy efficiency include building orientation, natural ventilation, atria, skylights, high performance glazing and mechanical equipment, and energy efficient lighting.

Indoor Environmental and Air Quality – Current research indicates that exposure to some volatile organic compounds (VOCs) found in buildings may have short-term health effects (such as sick building syndrome) and long-term effects (such as building related illnesses). All buildings on Poplar Point should be designed, constructed, and operated with good indoor air quality as design criteria. Improved environmental and air quality can be achieved by reducing and controlling pollutant sources, designing for appropriate ventilation, and conducting ongoing, long-term building maintenance. The result will be a healthier indoor environment and (for businesses) improved employee productivity and increased profitability.

Resource Efficiency – Development sites, landscaped areas, and new buildings should be designed and constructed to reduce consumption of natural and man-made resources. This includes efficient use of the building site, water efficient and local planting, reduced water consumption, and the use of building materials with high-recycled content. When determining product usage, designers, builders and Governments should consider the life-cycle costs associated with various building materials.



Figure 33: Example of green roof

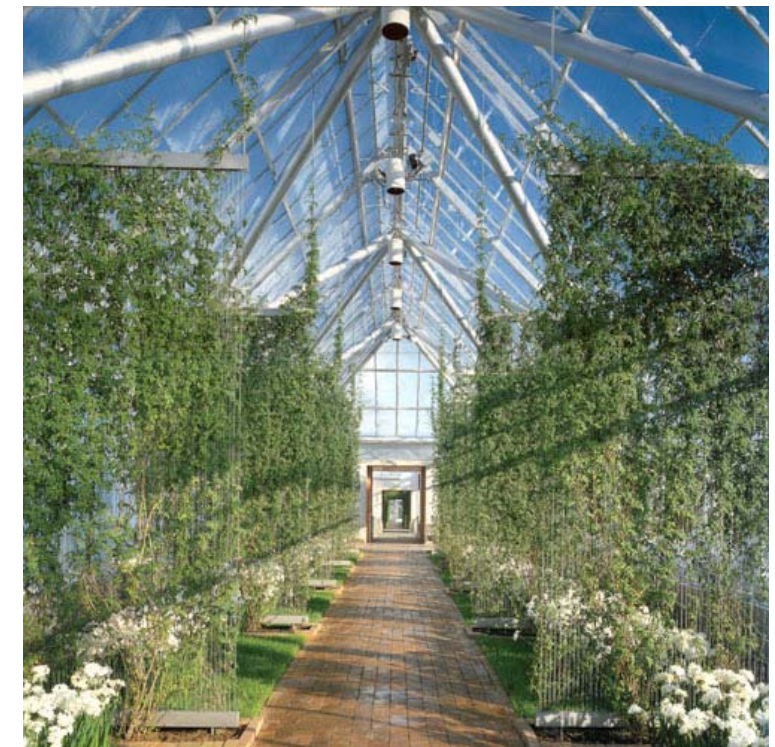


Figure 34: Example of greenhouses

